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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/699,537	10/31/2003	Dong Keun Han	8111-034-999	2697

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JONES DAY  
222 EAST 41ST ST  
NEW YORK, NY 10017

EXAMINER
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BERMAN, SUSAN W

ART UNIT	PAPER NUMBER
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1711

DATE MAILED: 02/06/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/699,537

**Applicant(s)**

HAN ET AL.

**Examiner**

Susan W. Berman

**Art Unit**

1711

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 June 2005 & 11/22/2005.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-8 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                           |                                                                                                              |
|-------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                                          | 4) <input checked="" type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. <u>1-6-06</u> . |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                                      | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)                                  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>6/05</u> . | 6) <input type="checkbox"/> Other: _____.                                                                    |

***Withdrawal of Final Rejection mailed 08/25/2005***

Upon reconsideration of Applicant's arguments submitted 11/22/2005, following the telephone interview with Irina Britva on January 6, 2006, it was agreed that the obviousness-type double patenting rejection set forth in the Final Rejection mailed 08/25/2005 could be withdrawn in the absence of a prior art rejection and that the advisory Action mailed 12/07/2005 should be withdrawn.

However, upon reconsideration of the rejections set forth in the Non-Final Rejection mailed 03/22/2005 and applicant's response submitted 06/06/2005, it is noted that the rejections under 35 USC 103(a) over US 6,573,312 [Patent Application Publication No. US 2002/0072551] and 6,339,113 set forth in the Non-Final Rejection mailed 03/22/2005 have not been persuasively overcome. Therefore, the Finality of the Rejection mailed 08/25/2005 is withdrawn.

This Office Action replaces the Final rejection mailed 08/25/2005 and is in response to the Amendment after Non-Final Rejection submitted 06/06/2005.

***Terminal Disclaimer***

The terminal disclaimer filed on 06/16/2005 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of US Patent 6,339,113 or US Patent 6,573,312 has been reviewed and is accepted. The terminal disclaimer has been recorded. The provisional rejections of the instant claims under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims in US Patent 6,339,113 or US Patent 6,573,312 are hereby withdrawn.

***Response to Arguments***

Applicant's arguments filed 06/16/2005 have been fully considered but they are not persuasive for the following reasons.

Art Unit: 1711

Applicants have submitted a statement under 35 USC 103(c) to show common ownership of Patents 6,573,312 and 6,339,113 and the instant application at the time of invention. This submission is not persuasive because such a submission is persuasive only for provisional rejections under 35 USC 102(e)/103. See MPEP 706.02(k). US Patent 6,573,312 is available prior art under 35 USC 102(a) as well as under 102(e) and US Patent 6,339,113 is prior art under 102(b). Thus the rejections of record made under 35 USC 103(a) are proper under 35 USC 102(a)/103(a) or 102(b)/103(a). Accordingly, the rejections under 35 USC 103(a) of record over US 6,573,312 [ Patent Application Publication No. US 2002/0072551] and 6,339,113 are maintained. Applicant states in the Remarks that copies of the Assignment documents would be attached, however, no copies were received.

Applicant argues that the instantly claimed invention is patentably distinct from the invention claimed in Application No. 10/699,117. Applicant's argument is not persuasive because Huang '934 teaches the features not found in the claims of Application '117. Huang provides motivation to provide a one part composition comprising the components set forth in the claims of '117, as discussed herein below. Huang et al also provide motivation to substitute a photoinitiation system, as taught by in the analogous photopolymerizable compositions taught by Huang et al, in the compositions claimed in SN '117. The teaching of Huang et al further provides motivation to add HEMA to the analogous compositions claimed by SN '117 in order to provide an adhesive. Therefore, the double patenting rejection of record is maintained.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han et al (6,339,113, patented 01/15/2002) in view of Huang et al (4,966,934). Han et al disclose compositions comprising bis-GMA, Tri-GMA and Tetra-GMA, a diluent, inorganic filler, photoinitiator and other additives. Han et al do not teach adding an adhesive monomer or a hydrophilic monomer. The weight percents of components disclosed by Han et al '113 and instantly claimed overlap extensively. Han et al '113 do not teach adding an adhesive monomer or a hydrophilic monomer, as set forth in the instant claims.

Huang et al disclose dental adhesive compositions comprising bis-GMA, an adhesive promoting polymerizable monomer and a photoinitiating system and also disclose using HEMA in a primer composition (See columns 3-6, column 7, lines 30-41, and Table VIII). Huang et al teach that the compositions can be provided in a one-component system, cured in seconds by exposure to visible or UV light and display firm sustained adhesion to bones and to dentin and enamel of teeth (column 2, line 58, to column 3, line 20).

It would have been obvious to one skilled in the art at the time of the invention to add an adhesive monomer, as taught by Huang et al in analogous photopolymerizable compositions, to the compositions disclosed by Han et al. One of ordinary skill in the art at the time of the invention would have been motivated by an expectation of taking advantage of the adhesive properties taught by Huang et al. It would have been obvious to one skilled in the art at the time of the invention to add HEMA, as taught by Huang et al in analogous compositions, to the compositions disclosed by Han et al in order to provide an adhesive primer, as taught by Huang et al.

Claims 1-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Han et al (6,573,312, patented 06/03/2003) in view of Huang et al (4,966,934). Han et al disclose compositions comprising bis-GMA, Tri-GMA and Tetra-GMA, a diluent, inorganic filler, photoinitiator and other additives. Han et al

Art Unit: 1711

do not teach adding an adhesive monomer or a hydrophilic monomer. The weight percents of components disclosed by Han et al '312 and instantly claimed overlap extensively.

Huang et al disclose dental adhesive compositions comprising bis-GMA, an adhesive promoting polymerizable monomer and a photoinitiating system and also disclose using HEMA in a primer composition (See column s 3-6, column 7, lines 30-41, and Table VIII). Huang et al teach that the compositions can be provided in a one-component system, cured in seconds by exposure to visible or UV light and display firm sustained adhesion to bones and to dentin and enamel of teeth (column 2, line 58, to column 3, line 20).

It would have been obvious to one skilled in the art at the time of the invention to add an adhesive monomer, as taught by Huang et al to the analogous photopolymerizable compositions disclosed by Han et al. One of ordinary skill in the art at the time of the invention would have been motivated by an expectation of taking advantage of the adhesive properties taught by Huang et al. It would have been obvious to one skilled in the art at the time of the invention to add HEMA to the analogous compositions disclosed by Han et al in order to provide an adhesive primer, as taught by Huang et al.

### ***Double Patenting***

The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Art Unit: 1711

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

Claims 1-8 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-24 of copending Application No. 10/699,117 in view of Huang et al (4,966,934). Although the conflicting claims are not identical, they are not patentably distinct from each other for the following reasons. SN '117 claims compositions comprising bis-GMA, Tri-GMA and Tetra-GMA, a diluent, an adhesive monomer, inorganic filler, photoinitiator and other additives. The weight percents of components claimed in SN '117 and the weight percents of components instantly claimed overlap extensively. The differences are that (1) the compositions of SN '117 consist of two pastes while the instantly claimed composition is a one-component system, (2) the polymerization initiator in the claims of SN '117 is not specifically a photoinitiation system and (3) that a hydrophilic monomer is not set forth.

Huang et al disclose dental adhesive compositions comprising bis-GMA, an adhesive promoting polymerizable monomer and a photoinitiating system and also disclose using HEMA in a primer composition (See columns 3-6, column 7, lines 30-41, and Table VIII). Huang et al teach that the compositions can be provided in a one-component system, cured in seconds by exposure to visible or UV light and display firm sustained adhesion to bones and to dentin and enamel of teeth (column 2, line 58, to column 3, line 20). It would have been obvious to one skilled in the art at the time of the invention to substitute a photoinitiation system, as taught by Huang et al in analogous photopolymerizable compositions, in the compositions claimed in SN '117. One of ordinary skill in the art at the time of the invention would have been motivated by an expectation of providing a fast curing dental adhesive composition in a one component system, as taught by Huang et al. It would have been obvious to one skilled in the art at the time of the invention to add HEMA to the analogous compositions claimed by SN '117 in order to provide an adhesive, as taught by Huang et al.

Art Unit: 1711

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Conclusion***

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Susan W. Berman whose telephone number is 571 272 1067. The examiner can normally be reached on M-F 9:30-6:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James Seidleck can be reached on 571 272 1078. The fax phone number for the organization where this application or proceeding is assigned is 571 273 8300.



Art Unit: 1711

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SB  
1/31/06



Susan W Berman  
Primary Examiner  
Art Unit 1711